



## MILLING COLUMN CONVERSION P/N 6101

### Your mill column options when using the P/N 6100 Horizontal Milling Conversion

The horizontal milling conversion, P/N 6100 allows you to orient your milling head horizontally to work on a part from the side or end. The column is removed from the mill base and mounted to horizontal conversion base plate next to the mill base. When using a “tall” setup on your mill table, such as a rotary table or tilting angle table, you may be able to use your standard mill column. However, if you need to be able to mill down close to the surface of the table, you will need to have a shorter column.

#### Ways to obtain a shorter column

There are several ways to obtain and use a shorter column:

1) **Modify your column base yourself**—If you already have a mill and are purchasing the 6100 horizontal conversion as an accessory you can use the instructions included here on page 2 to cut and mill your existing base yourself, making it into a 2-piece base.

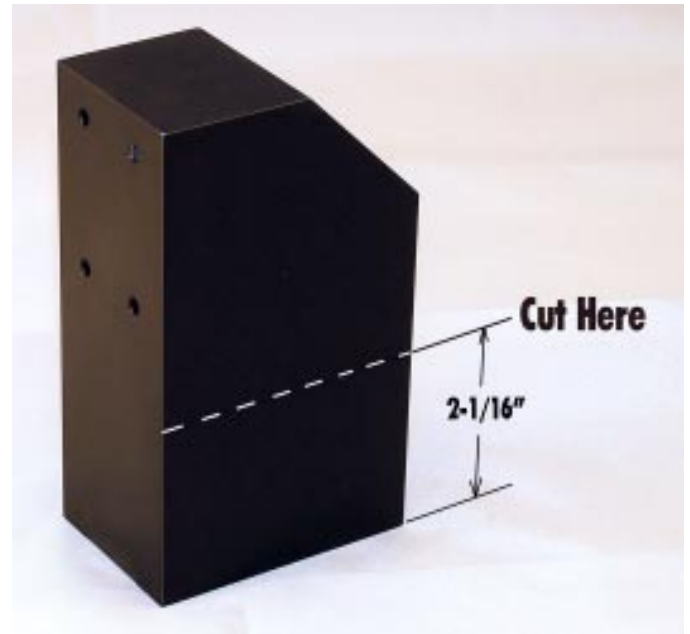
or

**Have us modify your mill base for you**—If you do not have the capability or the desire to shorten your own base, you can return your Z-axis column to Sherline and we will cut and mill your base for you. This service is what is referred to as P/N 6101. Your column base is cut in two, machined flat, the clearance holes are extended through the 2" base portion and 1/4-20 holes are drilled and tapped into the upper portion of the column base. Your column is then re-attached and squared on a surface plate and the assembly is returned to you. (The longer screws needed to attach the 2-piece base to your mill when using it in the regular vertical configuration are included with the 6100 conversion package.)

3) **Order one as part of your new mill**—If purchasing the 6100 conversion at the same time as you are purchasing a new mill, you can specify that you want the 6101 two-piece column option included with your mill. It will come with the two-piece column base instead of the standard one-piece base. There is a small extra charge for the split base. Call for pricing.

4) **Purchase the additional parts separately**—You can keep your one-piece mill base for use in the vertical configuration and purchase one or both parts of the split

base. The split column base top by itself is P/N 61060. The upper and lower halves together are P/N 61050.



*FIGURE 1—P/N 6101 consists of you returning your mill base and column (not shown) and we cut where shown, mill the surfaces flat, re-install and square your column and return to you.*



*FIGURE 2—P/N 61050 consists of a shortened column top, 2" column bottom and two 3" x 1/4-20 screws.*

### Modification to mill column for use with Horizontal Milling Conversion P/N 6100

When using the Horizontal Milling Conversion, the column should be shortened by 2 inches to allow the headstock to be lowered below the top of the table. The drawings below show the operations necessary for you to accomplish this yourself. Longer attachment screws (included with P/N 6100) are required to reach through the 2" block and into the threaded portion of the upper block. The column may also be returned to the factory where these modifications will be done for you. Please call for pricing.

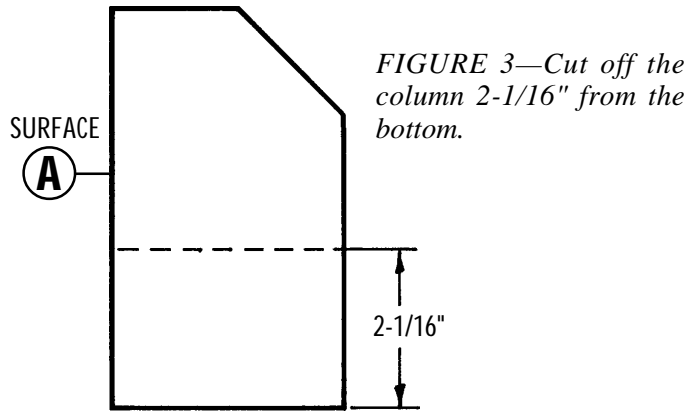
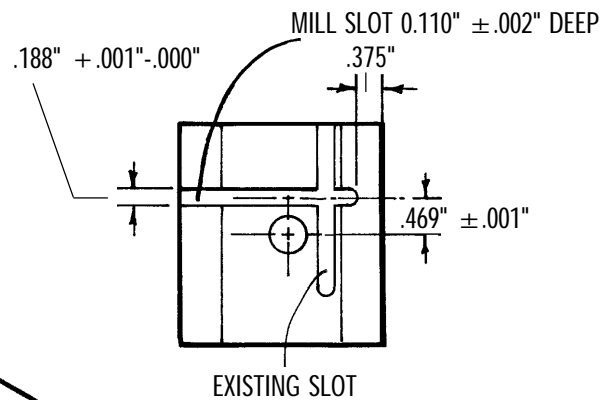


FIGURE 3—Cut off the column 2-1/16" from the bottom.

### Modification to Column Saddle on older machines

Sherline mills manufactured since 1993 have two perpendicular slots milled for the alignment key to facilitate mounting the headstock in either vertical or horizontal alignment. Older machines have only the vertical key slot. The drawing in Figure 5 shows the dimensions of the additional slot so you can machine it into your saddle.

The newer column saddles also have a laser engraved angle scale imprinted on them. This makes it easier to reference approximate angles for rotating the headstock for angle milling. If you wish to purchase a new mill column saddle rather than modify your old one, order part number 45040. As an alternative, your old saddle can be returned to Sherline to have us cut the additional slot. Call for price.



EXISTING SLOT

FIGURE 5—Milling a second keyway slot in the mill saddle on machines made prior to 1993.

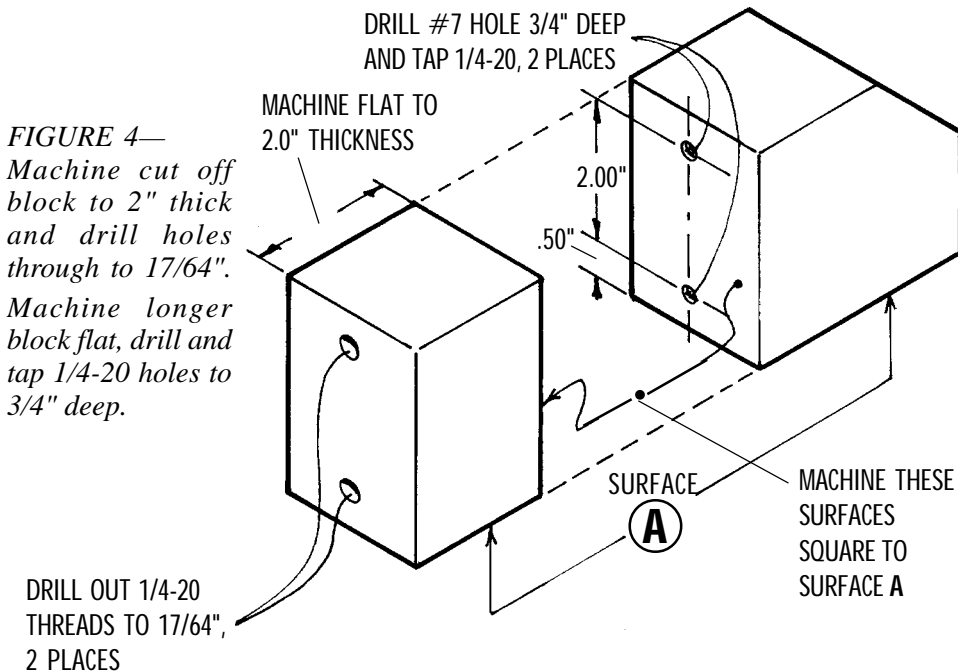


FIGURE 4—Machine cut off block to 2" thick and drill holes through to 17/64". Machine longer block flat, drill and tap 1/4-20 holes to 3/4" deep.

NOTE: For use in normal milling, the two parts of the milling column can be taped back together with black electrical tape to keep them in register. (The bolts hold the parts together, the tape is just to keep them located for easier mounting.)

NOTE: When the mill column is reattached to the shortened column base it must be realigned to assure it is square to the base. The four bolts will get it close to square, but not perfect. If your mill column is returned to us along with your column base for modification, we do this procedure for you when re-installing the column. If you are modifying the base yourself, refer to the instructions on squaring up your mill in the *Assembly and Instruction Guide* that came with your mill.